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the bony matter, the animal matrix was found to be distinctly fibrous, as in that of dentine.

From the three diverse sources from which similar appearances have been adduced—tooth, ossified aorta, and the present specimen—all, though differing in others, yet agreeing in the one point, of the ossification taking place in a fibrous matrix, are we not warranted in concluding it probable, that in all cases in which a fibrous tissue, not normally the seat of ossific process, undergoes calcific degeneration, the resulting structure has a certain resemblance to dentine, at any rate is much more allied to it than it is to true bone, and that the morbid calcification of various fibrous structures very much resembles the normal calcification of the animal material of dentine?

Dr. HYDE SALTER, 18th of April, 1854.

3.—*Vegetable Fungus growing in a cavity of the Lung.*

E. C., a married woman, mother of four children, and 49 years of age, was in St. Thomas's Hospital from the 29th of November, 1853, to December the 21st. She had been labouring for two or three years under the ordinary symptoms of chronic bronchitis, and of this disease she died. She was examined on the 22nd of December, four-and-twenty hours after death. The body was of ordinary size, not emaciated, and the lower extremities were œdematous.

The right ventricle of the heart was dilated and hypertrophied.

The right lung was adherent, and the pleura contained a few ounces of serum. The lung was much reduced in size; emphysematous along its anterior margin; congested and sparsely crepitant throughout; without trace of tubercle or other abnormal deposit. The bronchial tubes were highly congested, and filled with muco-purulent fluid. The left pleura was also adherent, and held about an ounce of fluid. The lung was larger and more crepitant than the right, but it was much congested, its anterior margin was emphysematous, and its bronchial tubes were in the same condition as those of the opposite lung. There was no deposit of tubercle, but in the apex were two

DESCRIPTION OF PLATE III.

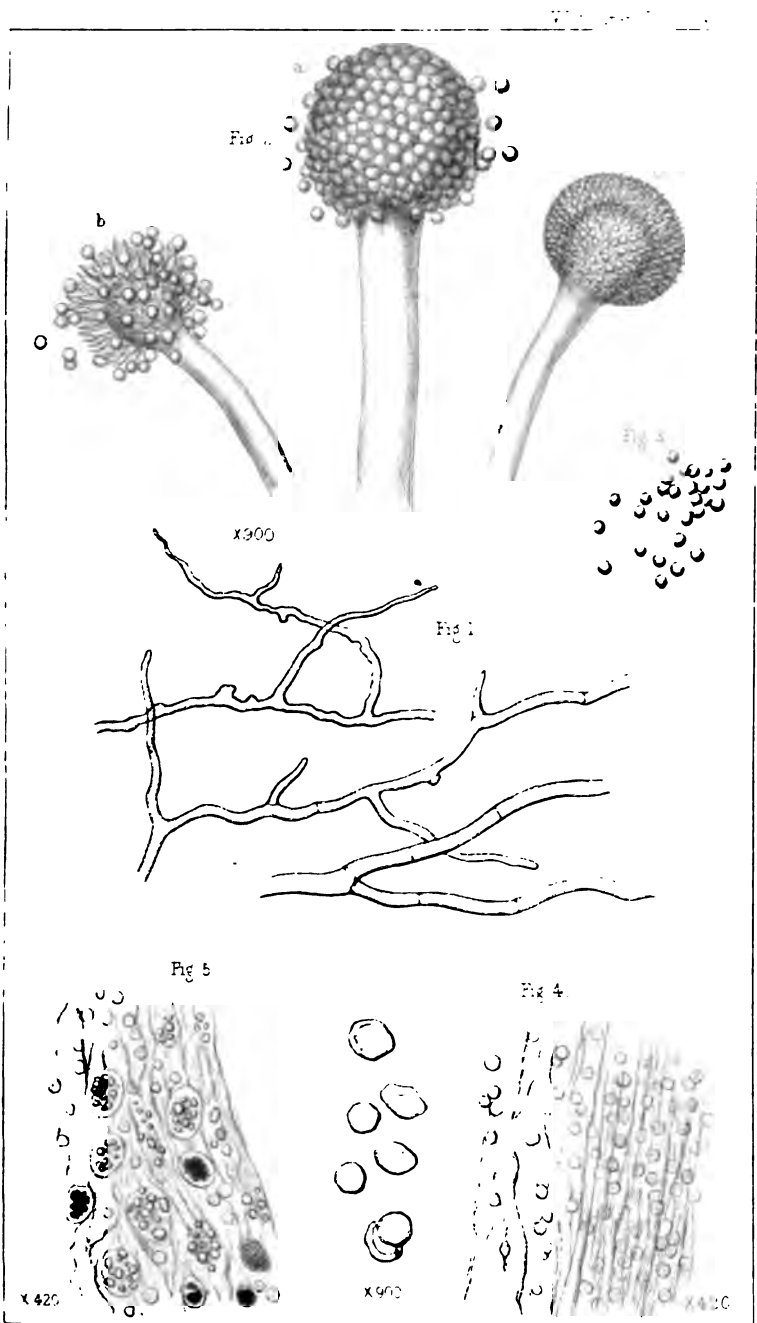
The figures 1, 2, 3, illustrate Dr. Bristowe's paper on Fungus from a cavity in the Lung. Page 38.

Fig. 1. Mycelium of fungus.

Fig. 2. Fructification of the same. *a.* Head covered with sporules. *b.* Sporules partly separated: some are seen attached to the attenuated extremities of bottle-shaped processes. *c.* Head from which sporules are completely separated, or, possibly on which they have not yet appeared.

Fig. 3. Sporules. These figures are all magnified 900 diameters.

The figures 4 and 5 illustrate Dr. Bristowe's description of the minute structure of Casts from the Bronchial Tubes. Page 43.



communicating cavities, together about equal to a pigeon's egg. They were empty of secretion, but their parietes were moist, somewhat reticulated, and covered more or less by an opaque adherent film of fibrinous material. On the upper surface of the septum, by which the cavities were imperfectly divided, was a soft velvety mass, occupying an area about equal to that of half a finger-nail, and measuring close upon a line, or line and a half in thickness. It was dry and powdery on the surface, and had a dull greenish hue. It was firmly attached to the wall of the cavity, and was clearly a mould or vegetable fungus growing from it.

Under the microscope it exhibited a distinct mycelium, and a perfectly-developed fructification.

The mycelium (Plate III. Fig. 1.) consisted of delicate tubes, which terminated in undulated roundish points, and varied between the $\frac{1}{80000}$ th and $\frac{1}{10000}$ th of an inch in diameter; they branched in different directions, and presented here and there little bulgings, which doubtlessly were the commencements of new branches. The smaller ones displayed no visible transverse septa, but their substance appeared to be made up of two materials, having different refractive powers, one of which seemed essentially to form the tube, while the other occupied globular or moniliform cavities, situated in its axis. In the larger tubes, however, more or less distinct cross-lines, arranged at definite intervals, indicated a cellular structure.

The branches supporting the fructification were of considerable length, and much thicker than those belonging to the mycelium, indeed the largest measured about the $\frac{1}{10000}$ th of an inch in thickness. They were cylindrical, without transverse septa, presented a well-defined limiting membrane, and pellucid structureless contents. At their free extremities they enlarged into globular or flask-like expansions, (Plate III. Fig. 2, a, b, c.) the greatest diameter of which was generally about twice that of the stalk from which they sprung. Their cavity was apparently perfectly continuous with that of the stalk, and their contents identical. The sporules (Plate III. Fig. 3.) were situated on these expansions, and in the perfect heads they were so numerous and thickly placed as almost to con-

ceal them. These bodies were globular, pellucid, and about the $\frac{1}{1000}$ th or $\frac{1}{800}$ th of an inch in diameter; they were free, and attached singly to the attenuated extremities of bottle-shaped processes, which were of considerable, but uniform length, and thickly but regularly arranged on the receptacle from which they grew. The ripe sporules appeared to break away readily from their stalks, but the latter seemed invariably to be left cohering to the receptacle. Some of the heads presented very few sporules, some none; and though these peculiarities were sometimes due to the cause just alluded to, it is probable that they were sometimes owing to incomplete development. The largest complete heads measured the $\frac{1}{100}$ th of an inch in diameter, but many were considerably smaller.

Remarks.—There was no appearance of tubercle in either lung, yet I am inclined to think that the cavity containing the fungus was of tubercular origin; at all events, the difficulty of accounting for its production is at least as great on any other supposition as on this.

The fungus clearly sprung from the walls of the cavity, and, most probably, had grown during the life of the patient; for, in the first place, there can be little doubt that the sporules were carried into the lung during life, since there is no natural cause which could have conveyed them thither afterwards. 2ndly. I believe it would have required a considerably longer period than four-and-twenty hours for the fungus to have attained the stage of growth in which it was discovered. And lastly, the section of lung, with the mould adhering to it, was laid aside in a moist place for twenty-four hours, under circumstances favourable for growth, and yet, at the end of that time, there was no appreciable increase of size, or alteration of character.

It is probably requisite, in order that a fungus of this kind may reach its perfect development, that the cavity which contains it should continue for some time in an empty or nearly empty state; for any considerable amount of secretion would scarcely fail to wash away and destroy it, or, at least, to prevent the completion of its fructification.

I am not very conversant with the lower forms of fungi, and

know of none perfectly identical with this ; it has no resemblance to the *penicilium glaucum*, and is perfectly distinct from the ordinary mucor. Dr. Hughes Bennett has described a vegetable growth which he has observed in tubercular cavities, but the one under consideration differs materially from that, as may be seen on reference to his paper on the subject, and to the drawings accompanying it. In the first edition (the second I have not had the opportunity of consulting) of Robin's work on "Parasitic Vegetables," I find two drawings of fungi discovered in the lungs of birds ; one by Müller and Retzius, the other by Deslongchamps. They are both represented on a small scale, and bear so much resemblance to one another as, probably, to be identical. There is also a considerable likeness between them and the one described by myself ; but if the former are accurately copied from nature, the resemblance is not perfect, since their sporules are made to appear sessile on the receptacle instead of pedunculated.

Dr. J. S. BRISTOWE, 3rd of January, 1854.

4.—*Fibrinous Casts of the Bronchial Tubes.*

The patient who expectorated these plastic casts is a widow, æt. 25, at present under Dr. Fuller's care at St. George's Hospital. She is well made, of average robustness, of somewhat dark complexion, and pale, but not unhealthy in appearance. She states that her habits are in every respect temperate and regular. Her parents both died at the age of 59, of cholera : her father was a healthy man : her mother had suffered during nearly twenty years from cough and occasional hæmoptysis. She had five sisters and one brother, of whom two sisters and the brother survive. Her other three sisters are reported to have died of consumption : two at the age of thirty, and one at the age of fifteen. The latter is reported to have expectorated fibrinous casts of the bronchial tubes for at least two months before her death, and it is questionable whether she did really die of consumption. As a child, this patient enjoyed excellent health, and up to the present time she has not had measles, whooping cough, or croup ; at the age of fourteen, however, she was seized with ague, and about a twelvemonth afterwards began